

WHAT IS CLAIMED IS:

1 1. A semiconductor package comprising:
2 a package body, containing an integrated-circuit chip having an optical sensor,
3 that can be fitted into an object having two parts suitable for being coupled, and in which
4 package a board provided with electrical connection tracks is placed in a position such that the
5 optical sensor is located facing an opening in this object;

6 wherein the said package body carries, on the one hand, resilient rear electrical
7 connection leads that project from its rear face and are electrically connected to the said chip and
8 has, on the other hand, a front bearing surface such that, when the said package body is fitted
9 into the said object and when the said parts of this object are coupled, the front bearing surface of
10 the said body bears on an inner surface of a part of the object and the said resilient rear leads bear
11 resiliently on the respective electrical connection tracks of the board.

1 2. The package according to Claim 1, wherein the said package body and the object
2 have respective positioning surfaces that are perpendicular to the said bearing surfaces.

1 3. The package according to Claim 1, wherein the object has an internal housing for
2 housing part of the package body.

1 4. The package according to Claim 1, wherein the resilient rear electrical connection
2 leads are curved.

1 5. The package according to Claim 1, wherein the optical sensor is located on an
2 opposite side from the said resilient rear electrical connection leads.

1 6. The package according to Claim 1, wherein the internal surface of the object
2 extends around the aforementioned opening.

1 7. A product, comprising:
2 a first cover;
3 a printed circuit board associated with the first cover;
4 a semiconductor package having a first surface and a second surface, the package
5 including a plurality of resilient electrical connection leads extending from the first surface, the
6 semiconductor package positioned with its first surface adjacent the printed circuit board; and
7 a second cover mating with the first cover to define a cavity enclosing the printed
8 circuit board and the semiconductor package, the mating of the second cover to the first cover
9 exerting pressure against the second surface of the semiconductor package and causing the
10 resilient electrical connection leads to bear resiliently on the printed circuit board.

1 8. The product as in claim 7, wherein the second cover has an internal housing for
2 housing part of the semiconductor package.

1 9. The product as in claim 7, wherein the resilient electrical connection leads are
2 curved.

1 10. The product as in claim 7 wherein the semiconductor package includes an optical
2 sensor assembly associated with the second surface and wherein the second cover includes an
3 aperture therein aligned with the optical sensor assembly when the second cover is mated with
4 the first cover.

1 11. A product, comprising:
2 a split enclosure that mates together;
3 a printed circuit board located within the enclosure;
4 a semiconductor package also located within the enclosure, the package including
5 a plurality of resilient electrical connection leads extending therefrom and positioned in contact
6 with the printed circuit board, the leads being resiliently deformed in response to pressure
7 exerted by mating of the split enclosure on opposite sides of the semiconductor package and
8 printed circuit board.

1 12. The product as in claim 11, wherein the second cover has an internal housing for
2 housing part of the semiconductor package.

1 13. The product as in claim 11, wherein the resilient electrical connection leads are
2 curved.

1 14. The product as in claim 11 wherein the semiconductor package includes an
2 optical sensor assembly and wherein the split enclosure includes an aperture therein aligned with
3 the optical sensor assembly when the split enclosure is mated.

1 15. A semiconductor package comprising:
2 an integrated circuit chip;
3 a metal leadframe to which the integrated circuit chip is attached, the metal
4 leadframe including a plurality of electrical connection leads made of a pressure deformable
5 resilient material;
6 a package encapsulating the integrated circuit chip and metal leadframe, the
7 plurality of electrical connection leads extending therefrom in a curved shape under a bottom
8 surface thereof.

1 16. The package of claim 15 wherein the integrated circuit chip includes an optical
2 sensor and the package includes an aperture aligned with the optical sensor.

1 17. A semiconductor package, comprising:
2 an integrated circuit chip;
3 a plurality of electrical connection leads made of a pressure deformable resilient
4 material, each lead having a first and second end; and
5 a package enclosing the integrated circuit chip and through which a central
6 portion of each lead passes, the package causing the first end of each lead to resiliently contact a
7 surface of the integrated circuit chip and the second end of each lead extending from the package
8 in a curved shape under a bottom surface thereof.

1 18. The package of claim 17 wherein the integrated circuit chip includes an optical
2 sensor and the package includes an aperture aligned with the optical sensor.